

Running head: THE RELATIONSHIP BETWEEN PERCEIVED CO-WORKER  
LOAFING

The Relationship Between Perceived Co-worker Loafing and Elements of Work Plus  
the Role of Protestant Work Ethic

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### Abstract

This study examined the relationships perceived co-worker loafing has with job performance, undesirable work behaviours and job satisfaction. The study also examined whether Protestant work ethic moderated these relationships. Two-hundred and twenty one participants from a range of ages and occupations participated in a survey measuring these variables. Perceived co-worker loafing was negatively related to the social subdimension of job performance as well as job satisfaction. Several of the subdimensions of Protestant work ethic moderated the relationship between perceived co-worker loafing and one subdimension of job performance as well as several subdimensions of job performance and work behaviours. There was not a significant relationship between perceived co-worker loafing and work behaviours, however Protestant work ethic was still found to be a consistent moderator between this relationship. Protestant work ethic was also found to be a more nuanced variable than expected, with different subdimensions resulting in both positive and negative interactions.

## The Relationship Between Perceived Co-Worker Loafing and Elements of Work Plus the Role of Protestant Work Ethic

### **Introduction**

The perception of a co-worker not trying their hardest can be enough for someone to reduce their own effort at work (Mulvey & Klein, 1998) and has been found to lead to counterproductive work behaviours (Hung, Chi & Lu, 2009). However, not all research has found significant relationships between perceived co-worker loafing and these outcomes (Fang & Chang, 2014). There is also evidence that dispositional factors can have an influence on the relationship between perceived loafing and work performance (Hart, Karau, Stasson & Kerr, 2004). Research has indicated that Protestant work ethic, a personality trait that features the value of hard work, success and anti-leisure, could be one of these influential internal factors (Smrt & Karau, 2011). This study investigates relationship between perceived social loafing and job performance, job satisfaction, and undesirable work behaviours, and whether protestant work ethic moderates this relationship.

### **Social Loafing and the “Sucker” Effect**

In order to understand perceived co-worker loafing, social loafing must first be explained. The term social loafing refers to the situation in which a team’s output is not a result of an equal effort from each team member. This means that the person engaging in loafing is benefiting from the work of other group members without putting in adequate effort themselves (Fang & Chang, 2014; Comer, 1995). In some

instances the reason why individuals become social loafers is because they observe or anticipate social loafing from other people in their group. This is known as the “sucker effect” (Kerr, 1983). Many individuals do not want to be the “sucker” who carries loafers and free riders in their group. Therefore, they reduce their effort as well (Kerr, 1983). “Sucker” is a term used to describe someone who is easily deceived (Hung et al., 2009). It should be noted that individuals must believe that their fellow group members are making a conscious decision to withhold effort and therefore reduce their own effort as a result of this in order for it to be a case of the “sucker effect” (Schnake, 1991). This phenomenon was observed by Kerr (1983) who reported that when subjects saw that their capable partner consistently did not do well at their task, the subjects’ own effort was reduced. Similar results were found by Schnake (1991), whose study showed that participants tried to avoid becoming the “sucker” even when individual performance was measured and rewards were given after completion of tasks. This “sucker effect” indicates that workers’ performance can be influenced by their observation of co-workers and leads us to perceived co-worker loafing.

### **Perceived Co-worker Loafing and Job Performance**

The observation of co-workers has an influence on an individual’s work behaviours (Liden et al., 2004). An example of this is how the perceived loafing of co-workers can cause social loafing by the individual observing them (Comer, 1995). Perceived co-worker loafing differs from social loafing as it deals with the perception others have of their co-workers, regardless of the co-workers actual input (Liden et al., 2004). Because of what we already know of the “sucker effect”, it is likely that

perceived co-worker loafing will result in social loafing. If employees recognize loafing behaviour in their co-workers, they will most likely dedicate less effort to their own work (Kerr, 1983).

The effects of perceived co-worker loafing have been observed in various experimental studies. When participants in a clapping experiment thought their partners were not going to try as hard as them, they reduced their own effort (Jackson & Harkins, 1985). Mulvey and Klein (1998) conducted an experiment in which over 100 university students were placed into small groups. They reported that perceived loafing of fellow group members was positively related to anticipated lower effort and the “sucker effect.” Mulvey and Klein (1998) also suggested a “vicious cycle” of loafing in which one person thinks their teammate is loafing, so reduces their performance then another teammate observes this reduction in effort so reduces their own effort, and so on. This research indicates that perceived co-worker loafing will have a detrimental effect on job performance which is the first hypothesis of the present study.

*Hypothesis 1:* There will be a significant negative relationship between perceived co-worker loafing and job performance.

### **Perceived Co-worker Loafing and Other Work Behaviour**

Perceived co-worker loafing has also been found to influence work behaviours other than performance. Employees participated in a survey asking about perceived co-worker loafing and counterproductive work behaviour (Hung et al., 2009). Their

supervisors were also asked to rate the employee on the counterproductive work behaviour scale. They found a positive relationship between perceived loafing and counterproductive behaviours toward both the organization and co-workers such as being rude or showing up late Hung et al. (2009). There has not been any other research done on the relationship between perceived co-worker loafing and work behaviours which leaves an opening for further investigation. This study will look specifically at undesirable work behaviours, such as physical and psychological withdrawal and antagonistic behaviours. Perceived co-worker loafing is expected to relate positively to all three of these variables.

*Hypothesis 2:* There will be a significant positive relationship between perceived co-worker loafing and undesirable work behaviour (physical withdrawal, psychological withdrawal and antagonistic behaviour).

### **Perceived Co-worker Loafing and Job Satisfaction**

Job satisfaction has been described as a “pleasurable or positive emotional state resulting from an appraisal of one’s job or job experience” (Dunette, 1976) and it is a often-investigated aspect of organisational research (Arvey & Chen, 2016). There are several benefits to having workers with high job satisfaction. Studies have found that it can translate to superior customer service and also lead to more helping behaviours at work (Tsai & Wu, 2010). There have been no previous studies looking directly at the relationship between perceived co-worker loafing and job satisfaction. The closest is a study by Monzani, Ripoli, Peiro and Dick (2014) who found that perceived loafing had a negative influence on work results satisfaction and work

process satisfaction. The relationship between perceived co-worker loafing and job satisfaction will be investigated, however, no hypothesis is formulated due to the lack of previous research.

*Research question 1:* How does perceived co-worker loafing relate to job satisfaction?

### **Potential Moderators**

Believing that one's co-workers are loafing has not always been found to lead to negative consequences. In a study conducted by Fang and Chang (2014), participants who were conscious of their co-workers' loafing did not reduce their own effort, instead they increased their effort and made more contributions to the group. Liden et al. (2004) also found a negative correlation between perceived co-worker loafing and individual social loafing. It is likely that there is one or more moderating factors that cause these unexpected results to happen. Individual factors can also influence whether or not perceived co-working loafing has an affect on others' performance. Hart et al. (2004) found that participants in their experiment who scored high on achievement motivation did not engage in social loafing, no matter how their co-workers' performed. These results show how dispositional factors can contribute to the degree of influence perceived co-worker loafing has on individuals. Overall though, perceived co-worker loafing and its effects have not been investigated to any great extent. When the subject has been looked at, it is usually just discussed conceptually or addressed with empirical experiments, not through surveys relating to an actual workplace (Fang & Chang, 2014; Mulvey & Klein, 1998).



### **Protestant Work Ethic**

The term Protestant work ethic comes from sociologist Max Weber. He proposed the idea that the work ethic of Protestant groups played an important role in their economic success. This success was viewed as a sign of righteousness and therefore morally justified and helped start the rise of capitalism (Abele & Diehl, 2008; Christopher & Jones, 2004). The concept of Protestant work ethic can now be used without religious connotations. Rather, it is usually treated as a belief system concerning people who have certain traits and values relating to work and money (Christopher & Jones, 2004; Smith & Smith, 2011, Furnham, 1990). A review of studies by Morrow (1983) concluded that personality is the main reason people develop a Protestant work ethic, followed by culture and socialisation. As mentioned earlier, Protestant work ethic is not exclusive to one race or group (Rosenthal, Levy & Moyer, 2011). Despite being considered a central belief in western countries such as Canada, England and the United States (Rosenthal et al., 2011), studies have shown it is relevant in Turkish, Mexican, Taiwanese and Singaporean workers (Zulfikar, 2012, Firestone, Garza & Harris, 2005; Leong, Huang & Mak, 2014). The traits of a Protestant work ethic include a “strong belief in the value of good, clean, hard work” (Firestone, Garza & Harris, 2005) and that this hard work will lead to success (Townsend & Thompson 2014). Other traits include self discipline, delay of gratification, reinvestment of gains and honesty, also referred to as asceticism (Firestone et al., 2005; Townsend & Thompson, 2014). Hassall, Muller and Hassall (2005) say a disdain for leisure is another key trait and those high in Protestant work ethic believe too much leisure time is detrimental to society. People high in Protestant work ethic also have a high need for achievement and internal locus of control (Suazo

& Turnley, 2010). Abele and Diehl (2008) tells us that those with Protestant work ethic also have been reported to continue hard work regardless of external factors.

**Job performance.** There has been no prior research looking directly at the moderating effect of Protestant work ethic on the relationship between perceived co-worker loafing and job performance. However, based on the definition of the construct it would be plausible that it could have an influence on the relationship between perceived co-worker loafing and performance. People who score high in Protestant work ethic are supposed to be hard workers who maintain high levels of effort and motivation. They also believe that individuals are responsible for their own outcomes (Townsend & Thompson, 2014). Traits like these make it likely they will not be deterred by loafers in their work group. Smrt and Karau (2011) theorized that because individuals who rated high in Protestant work ethic value the importance of hard work and discipline they will resist the urge to slack off in group tasks and continue to work hard in the face of others' poor effort. Abele and Diehl (2008), using university students in controlled experiments, investigated whether different aspects of Protestant work ethic would moderate the sucker and free rider effects. They found that overall, this was not the case. However, those that scored highly on their instrumental value of hard work component on their Protestant work ethic scale did have a moderating influence on the sucker effect. Even when their partner contributed less than them, be it due to laziness or lack of ability, this did not affect their own effort. Smrt and Karau (2011) showed how personality, namely Protestant work ethic, can play a role in social loafing, not just situational factors. They studied a number of university students who participated in an idea generation task. It was found that participants with low levels of Protestant work ethic were much quicker to engage in

social loafing, while those with high levels of Protestant work ethic were more resilient and had higher effort levels. All of this research leads to the conclusion that Protestant work ethic will be a moderator which influences the relationship between perceived co-worker loafing and job performance.

*Hypothesis 3:* Perceived co-worker loafing and Protestant work ethic will interact to influence self-rated job performance, such that the negative relationship between perceived co-worker loafing and self-rated job performance is weaker when Protestant work ethic is high than when it is low.

**Work behaviour.** Work behaviours are what is known as discretionary behaviours. This means that people make a conscious decision to engage in them. Therefore, personality traits are likely to have an influence (Mount, Ilies & Johnson 2006). While there may not be any research looking directly at Protestant work ethic and work behaviour there have been studies investigating similar traits. Townsend and Thompson (2014) mention that traits such as self-efficacy and internal locus of control are strongly related to Protestant work ethic. Self-efficacy is a person's belief about their abilities and the influence they have over their lives (Wang, Hall & Rahimi, 2015). This ties in with the hard working and success components of Protestant work ethic. Fida, Paciello, Tramontano, Barbaranelli and Farnese (2015) found that self-efficacy can be a protective factor that reduces the impact of work stressors on counterproductive work behaviour. People with internal locus of control believe that the results in their life are a product of their own choices and effort. This also ties in with the hard working theme of Protestant work ethic that success comes from hard work by oneself and those who are unsuccessful are lazy (Gaus, 2014).

Research by Sprung and Jex (2012) indicated that those with internal locus of control were less likely to react with counterproductive work behaviour than external locus of control when faced with work stressors. Research by Storms and Spector (1987) found that internal locus of control would inhibit the effects feelings of frustration would have on counterproductive work behaviour. Conscientiousness is a personality trait found in the Big Five set of traits which is related to diligence, perseverance and hard work (Miller, 2015). This too matches well with the traits of Protestant work ethic. Miller (2015) found that those strong in conscientiousness were less likely to participate in workplace deviance. Looking at this research, it seems plausible that the personality-derived Protestant work ethic could have an influence on work behaviour. Eschleman and Bowling (2014) found that conscientiousness had a moderating effect on the relationship between work stressors and counterproductive work behaviours towards the organisation. Those low in conscientiousness had a stronger relationship between these two variables than those high in conscientiousness. Chang, Rosen, Siemieniec and Johnson (2012) examined the moderating effect of conscientiousness on the relationship between perceptions of organisational politics and organisational citizenship behaviours. They found that participants high in conscientiousness did not reduce their organisational citizenship behaviours in response to their perceptions of organisational politics. This previous research, while not specifically mentioning Protestant work ethic, suggest that it is plausible that Protestant work ethic would reduce the effect of perceived co-worker loafing on undesirable behaviours.

*Hypothesis 4:* Perceived co-worker loafing and Protestant work ethic will interact to influence undesirable work behaviour, such that the positive relationship

between perceived co-worker loafing and undesirable work behaviour is weaker when Protestant work ethic is high than when it is low.

**Job satisfaction.** There have been no studies done investigating the moderating role Protestant work ethic has on job satisfaction. However, there has been some research into what role similar traits play as moderators. Hsieh, Hsieh and Huang (2016) looked at the relationship between emotional labour and job satisfaction and what effect self-efficacy had on this relationship. They found that self-efficacy alleviated the negative relationship emotional labour had with job satisfaction. Orvis, Dudley and Cortina (2008) looked at the reactions employees had to psychological contract breach and what role conscientiousness played. They found that conscientiousness moderated the relationship between psychological contract breach and job satisfaction. Those low in conscientiousness had a lower job satisfaction in response to contract breach than those high in conscientiousness. Results like these may suggest that Protestant work ethic could also have a moderating effect on job satisfaction.

*Hypothesis 5:* Perceived co-worker loafing and Protestant work ethic will interact to influence job satisfaction, such that the negative relationship between perceived co-worker loafing and job satisfaction is weaker when Protestant work ethic is high than when it is low.

## **Methods**

### **Participants and Procedure**

Two-hundred and twenty-one workers participated in the survey. They were recruited through advertising around the college campus, malls, community notice boards, online survey websites and word of mouth. The chance to win one of five \$50 petrol vouchers was used as an incentive. The only selection criteria was that they have a job and work amongst people enough that they can perceive others as loafing. Ages ranged from 18 to 60+ years old, with the majority (38%) being in the 18-24 year old category. 61.7% were female, 35.8% were male and 2.6% were gender diverse. The majority (72.2%) worked full-time.

The survey was administered online using Qualtrics software. After going to the link which leads them to the survey, participants answered several questions about themselves such as their age, job and how often they observe their co-workers in action. Next, they answered the questions of perceived co-worker loafing, work behaviour, Protestant work ethic, job satisfaction and job performance. After completing the survey, they are provided a link where they can go to type their email address to enter the draw to win a \$50 petrol voucher.

### **Measures**

All scales used can be found in Appendix A. Perceived co-worker loafing was measured using Mulvey and Klein's (1998) four-item scale (example items are: "My

co-workers were ‘free-loaders’”, “My co-workers were contributing less than I anticipated”). Responses were made on a five-point scale (1 = strongly disagree to 5 = strongly agree). The Cronbach's alpha for this scale was .87.

Work behaviours were measured using the On-the-Job Behaviours scale developed by Lehman and Simpson (1992). Items are introduced with the statement “In the past twelve months, how often have you...?” then uses 22 items to describe work behaviours which contains four categories. These are positive work behaviours (“Done more work than required”, “Volunteered to work overtime”) with coefficient alpha of .82, psychological withdrawal behaviours (“Thought of being absent”, “Daydreamed”) with coefficient of .71, physical withdrawal behaviours (left work early without permission”, “Fallen asleep at work”) with coefficient alpha of 0.73 and antagonistic work behaviors (“Reported others for breaking rules or policies”, “Filed formal complaints”) with coefficient alpha of .78. Responses were obtained using a 7-point Likert-type scale where 1 = never and 7 = very often.

Protestant work ethic was measured using with the scale developed by Mirels and Garrett (1971). Responses were obtained using a 7-point Likert-type scale where 1 = strongly disagree and 7 = strongly agree. Examples of questions are “most people spend too much time in unprofitable amusement”, “Most people who do not succeed in life are just plain lazy” and “I feel uneasy when there is little work for me to do”. The scale has four subdimensions which are hard work leads to success (“The person who can approach an unpleasant task with enthusiasm is the person who gets ahead”), anti-leisure (“Most people spend too much time on unprofitable amusement”), asceticism (“There are few satisfactions equal to the realisation that one has done his

(her) best at a job”) and the intrinsic value of hard work (“Most people who do not success in life are just plain lazy”). The alpha values for the subdimensions are success = .76, asceticism = .59, hard work = .76 and anti-leisure = .68.

Job performance was measured using the scale by Abramis (1994). The two subdimensions were technical and social. An example of a technical question was “In the last week, how well were you making the right decisions?” and an example of a social question was “In the last week, how well were you avoiding arguing with others?”. Responses were obtained using five-point scale where 1 = very poorly and 5 = exceptionally well. The technical subdimension had a coefficient alpha of .81 and the social subdimension had a coefficient alpha of .75.

Job satisfaction was measured using the Job Satisfaction Index (Tsui, Egan & O'Reily, 1992). Examples of questions are “how satisfied are you with the nature of the work you perform?” and “how satisfied are you with the pay you receive for your job?”. Responses were obtained using a 5-point likert-type scale where 1 = strongly disagree and 5 = strongly agree. The coefficient alpha for the scale was .75.

### **Data Analyses**

The data was analysed using the SPSS statistics computer program. All measures were factor analyzed. The question “life would have very little meaning if we never had to suffer” from Protestant work ethic was removed due to low loadings. The factors matched the subdimensions of the measures. Mean composite scores for perceived co-worker loafing, job satisfaction and all subdimensions of Protestant



work ethic and work behaviours were created. Correlations and moderated regression analyses were run. Before running the regression analyses and creating the interaction terms by multiplying the predictor (perceived co-worker loafing) with each of the sub-dimensions of Protestant work ethic, predictors were mean centered. Any interactions were plotted using the Jeremy Dawson plotting tool (<http://www.jeremydawson.co.uk/slopes.htm>).

## Results

The means, standard deviations and correlations for all variables are presented in Table 1.

### Main Effect of Perceived Co-worker Loafing

For Hypothesis 1, there was a significant negative relationship between perceived co-worker loafing and job performance - social ( $B = -0.24$ ,  $SE = 0.06$ ,  $p < 0.05$ ). However, there was not a significant relationship between perceived co-worker loafing and job performance - technical ( $B = 0.10$ ,  $SE = 0.06$ ,  $p = 0.11$ ). Hypothesis 1 was supported in one outcome and not supported for one outcome. The regression coefficients for the hierarchical moderated regression examining Protestant work ethic and perceived co-worker loafing as predictors of self-rated job performance are seen in Table 2.

For Hypothesis 2, no significant relationship was found between perceived co-worker loafing and the work behaviour physical withdrawal ( $B = 0.09$ ,  $SE = 0.06$ ,  $p = 0.17$ ), work behaviour – psychological withdrawal ( $B = 0.08$ ,  $SE = 0.08$ ,  $p = 0.33$ )

and work behaviour – antagonistic behaviour ( $B = 0.07$ ,  $SE = 0.06$ ,  $p = 0.21$ ).

Hypothesis 2 was not supported for any outcomes. The regression coefficients for the hierarchical moderated regression examining Protestant work ethic and perceived co-worker loafing as predictors of work behaviours are presented in Table 3.

The study also set out to explore the relationship job satisfaction had with perceived co-worker loafing (Research question 1). It was found that there was a significantly negative relationship between perceived co-worker loafing and job satisfaction ( $B = -0.38$ ,  $SE = 0.07$ ,  $p < 0.05$ ). The regression coefficients for the hierarchical moderated regression examining Protestant work ethic and perceived co-worker loafing as predictors of job satisfaction are seen in Table 4.

### **Moderating Role of Protestant Work Ethic**

There were four subdimensions of Protestant work ethic – success, hard working, asceticism and anti-leisure. Hypothesis 3 was that Protestant work ethic would have a moderating effect on the relationship between perceived co-worker loafing and self-rated job performance. Specifically, it was predicted that there would be a positive relationship between perceived co-worker loafing and self-rated job performance for participants high in all dimensions of Protestant work ethic.

Protestant work ethic – hard working was a significant moderator of the relationship between perceived co-worker loafing and job performance - technical ( $B = 0.13$ ,  $SE = 0.06$ ,  $p < 0.05$ ). This interaction can be seen in Figure 1. When Protestant work ethic – hard working was low, there was no relationship between

perceived co-worker loafing and the job performance - technical, whereas when the Protestant work ethic – hard working was high, there was a positive relationship between perceived co-worker loafing and the job performance – technical.

For Hypothesis 4, Protestant work ethic – success was a significant moderator of the relationship between perceived co-worker loafing work behaviour – physical withdrawal ( $B = -0.15$ ,  $SE = 0.08$ ,  $p = 0.05$ ). This interaction can be seen in Figure 2. When Protestant work ethic - success was low, there was a positive relationship between perceived co-worker loafing and work behaviour – physical withdrawal, whereas when the Protestant work ethic - success was high there was a negative relationship between perceived co-worker loafing and work behaviour -physical withdrawal. These results show Hypothesis 4 was partially supported.

Protestant work ethic – asceticism was a significant moderator of the relationship between perceived co-worker loafing and work behaviour – psychological withdrawal ( $B = 0.08$ ,  $SE = 0.07$ ,  $p < 0.05$ ). This interaction can be seen in Figure 3. When Protestant work ethic - asceticism was low, there was a negative relationship between perceived co-worker loafing and work behaviour – psychological withdrawal, whereas when the Protestant work ethic - asceticism was high, there was a positive relationship between perceived co-worker loafing and work behaviour – psychological withdrawal.

Protestant work ethic – hard working was a significant moderator of the relationship between perceived co-worker loafing and work behaviour – antagonistic ( $B = 0.12$ ,  $SE = 0.05$ ,  $p < 0.05$ ). This interaction can be seen in Figure 4. When

Table 1

*Means, standard deviations and correlations for each variable*

Variable	Mean	Standard Deviation	Perceived co-worker loafing	PWE – anti-leisure	PWE - success	PWE - asceticism	PWE – hard working	WB - positive	WB – physical withdrawal	WB - antagonistic	WB – psychological	JP - technical	JP - success	Job Satisfaction
Perceived co-worker loafing	2.37	0.91												
PWE – anti-leisure	2.52	0.96	.36**											
PWE - success	4.86	1.07	.03	.27**										
PWE - asceticism	4.32	0.99	.06	.22**	.37**									
PWE – hard working	3.37	1.27	.23**	.42**	.53**	.37**								
WB - positive	4.10	1.28	.07	.03	.13	.01	.02							
WB – physical withdrawal	1.47	0.66	.18*	.16*	-.02	.13	.19*	.08						
WB - antagonistic	1.45	0.58	.16*	.15	.02	.00	.22**	.34**	.50**					
WB – psychological withdrawal	2.83	0.82	.11	.00	-.14	-.03	.09	-.11	.55**	.32**				
JP -technical	3.78	0.66	.11	-.05	.15	.06	.15	.23**	-.07	.08	-.10			
JP - social	4.05	0.67	-.39**	-.32**	-.09	-.02	-.12	-.04	-.06	-.21**	.07	.30**		
Job satisfaction	3.51	0.76	-.37**	.06	.18*	.06	.11	.09	-.04	.04	-.22**	.14	.23**	

\*  $p < .05$ ; \*\*  $p < .001$ ; PWE is Protestant work ethic, WB is work behaviour, JP is job performance

Table 2				
<i>Regression coefficients for the hierarchical moderated regression examining Protestant work ethic and perceived co-worker loafing as predictors of self-rated job performance</i>				
Variable	Job Performance - Technical		Job Performance - Social	
	B	SE	B	SE
<i>Step 1</i>				
Perceived loafing	0.10	0.06	-0.24*	0.06
PWE – Anti-leisure	-0.13	0.07	-0.16*	0.06
PWE - Success	0.08	0.06	-0.04	0.06
PWE - Asceticism	-0.01	0.06	0.03	0.06
PWE – Hard working	0.06	0.05	0.03	0.05
R <sup>2</sup>	.03		.17	
<i>Step 2</i>				
Perceived loafing	0.12	0.06	-0.24*	0.06
PWE – Anti-leisure	-0.16*	0.07	-0.16	0.06
PWE - Success	0.09	0.06	0.04	0.06
PWE - Asceticism	0.03	0.06	0.04	0.06
PWE – Hard working	0.05	0.05	0.02	0.05
Perceived loafing x PWE – Anti-leisure	0.05	0.06	-0.03	0.06
Perceived loafing x PWE - Success	-0.07	0.08	-0.04	0.07
Perceived loafing x PWE - Asceticism	-0.12	0.06	-0.06	0.06
Perceived loafing x PWE – Hard working	0.12*	0.06	0.03	0.06
R <sup>2</sup>	.06		.17	
R <sup>2</sup> change	.03		.00	
* = $p < .05$ ; PWE is Protestant work ethic; SE is standard error.				

Protestant work ethic – hard working was high, there was a positive relationship between perceived co-worker loafing and work behaviour - antagonistic, whereas when Protestant work ethic – hard working was low, there was a negative relationship between perceived co-worker loafing and the work behaviour - antagonistic.

Table 3

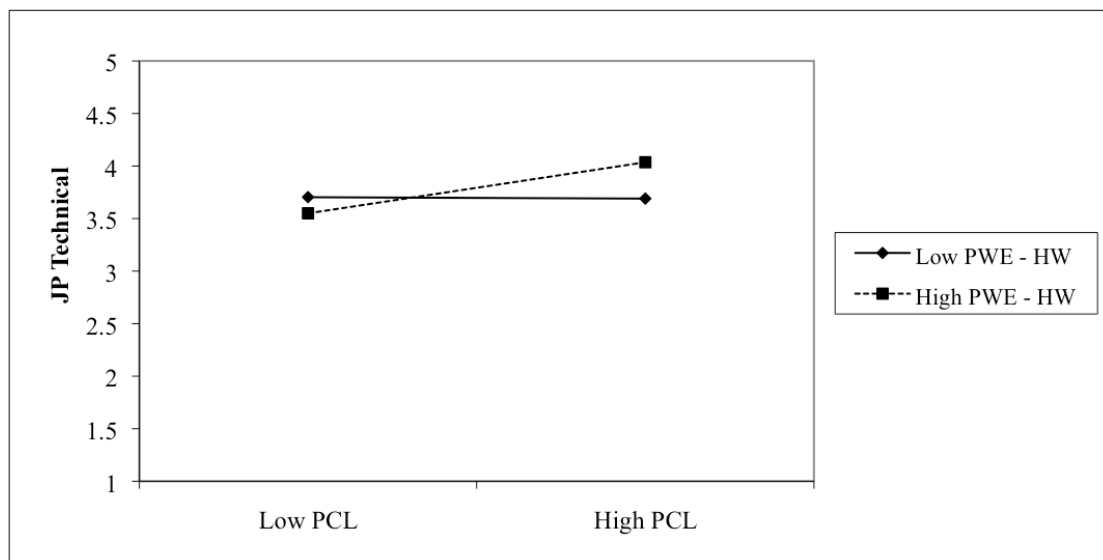
*Regression coefficients for the hierarchical moderated regression examining Protestant work ethic and perceived co-worker loafing as predictors of work behaviour.*

[illegible]

Table 4		
<i>Regression coefficients for the hierarchical moderated regression Protestant work ethic and perceived co-worker loafing as predictors of job satisfaction</i>		
Variable	Job Satisfaction	
	B	SE
<i>Step 1</i>		
Perceived loafing	-0.38*	0.07
PWE – Anti-leisure	0.11	0.07
PWE - Success	0.09	0.07
PWE - Asceticism	-0.01	0.06
PWE – Hard working	0.05	0.06
R <sup>2</sup>	.17	
<i>Step 2</i>		
Perceived loafing	-0.40*	0.07
PWE – Anti-leisure	0.14*	0.07
PWE - Success	0.12	0.06
PWE - Asceticism	-0.02	0.06
PWE – Hard working	0.04	0.06
Perceived loafing x PWE – Anti-leisure	-0.18*	0.07
Perceived loafing x PWE - Success	0.27*	0.08
Perceived loafing x PWE - Asceticism	-0.09	0.07
Perceived loafing x PWE – Hard working	0.02	0.06
R <sup>2</sup>	.25	
R <sup>2</sup> change	.08	
* = $p < .05$ ; PWE is Protestant work ethic; SE is standard error.		

Protestant work ethic – anti-leisure was a significant moderator of the relationship between perceived co-worker loafing and job satisfaction ( $B = -0.18$ ,  $SE = 0.07$ ,  $p < 0.05$ ). This interaction can be seen in Figure 5. When Protestant work ethic – anti-leisure was low, there was negative relationship between perceived co-worker loafing and the job satisfaction, whereas when Protestant work ethic – anti-leisure was high, there was a significant negative relationship between perceived co-worker loafing and the job satisfaction.

Protestant work ethic – success was a significant moderator of the relationship between perceived co-worker loafing and job satisfaction ( $B = 0.27$ ,  $SE = 0.08$ ,  $p < 0.05$ ). This interaction can be seen in Figure 6. When Protestant work ethic – success was high, there was a weak negative relationship between perceived co-worker loafing and the job satisfaction, whereas when Protestant work ethic – success was low, there was a significant negative relationship between perceived co-worker loafing and the job satisfaction.



*Figure 1.* Interaction between perceived co-worker loafing (PCL) and Protestant work ethic – hard working (PWE – HW). JP is job performance.



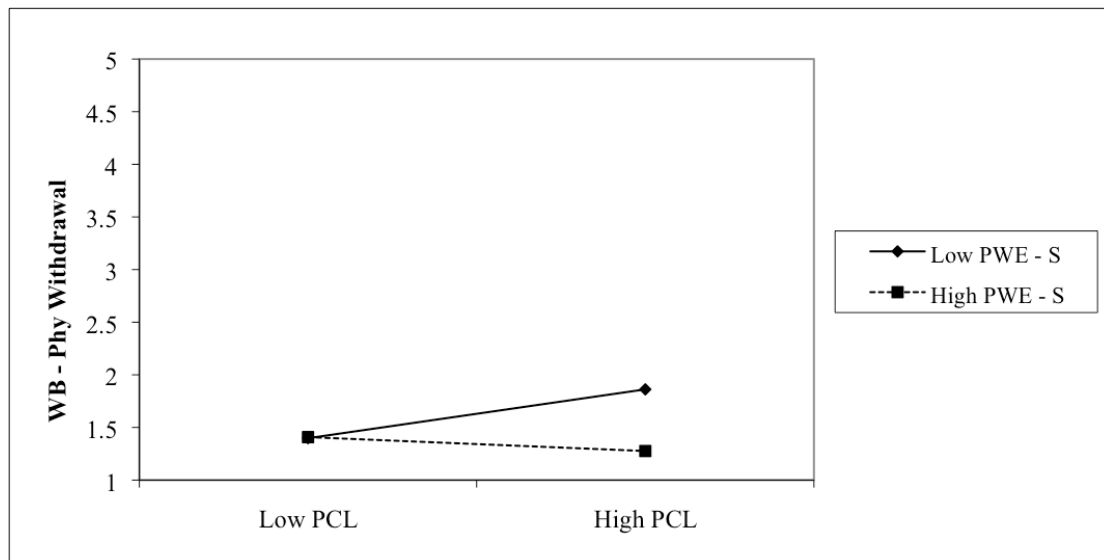


Figure 2. Interaction between perceived co-worker loafing (PCL) and Protestant work ethic – success (PWE – S). WB – Phy Withdrawal is work behaviour – physical withdrawal

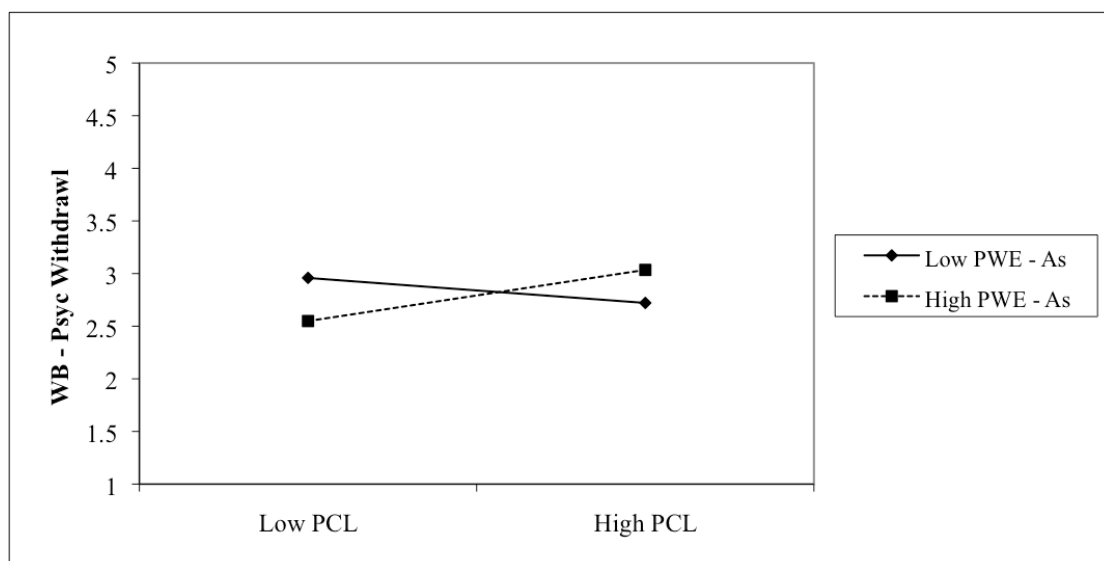


Figure 3. Interaction between perceived co-worker loafing (PCL) and Protestant work ethic – asceticism (PWE – As). WB – Psyc Withdrawal is work behaviour – psychological withdrawal

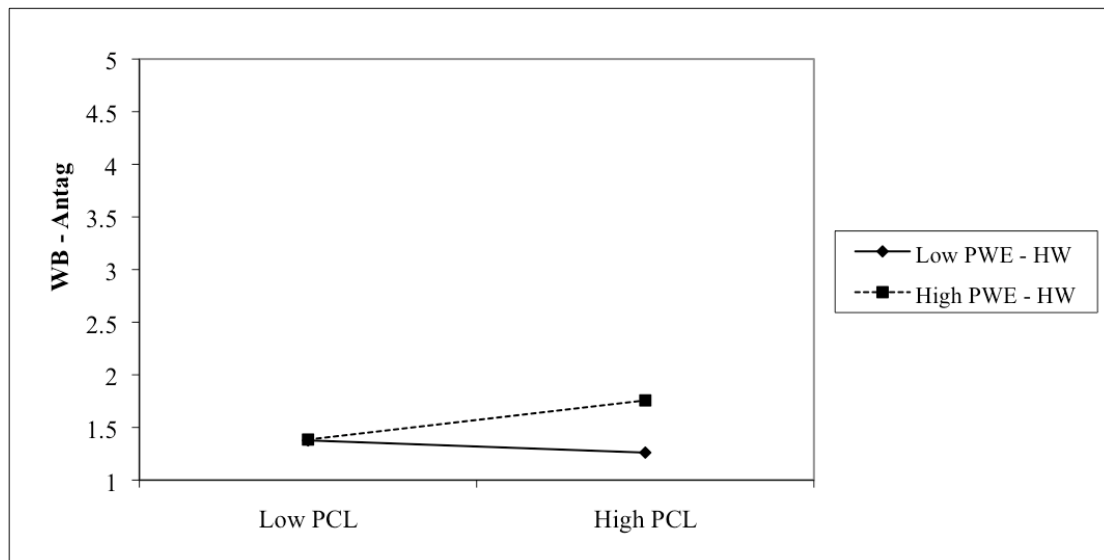


Figure 4. Interaction between perceived co-worker loafing (PCL) and Protestant work ethic – hard working (PWE – HW). WB – Antag is work behaviour - antisocial

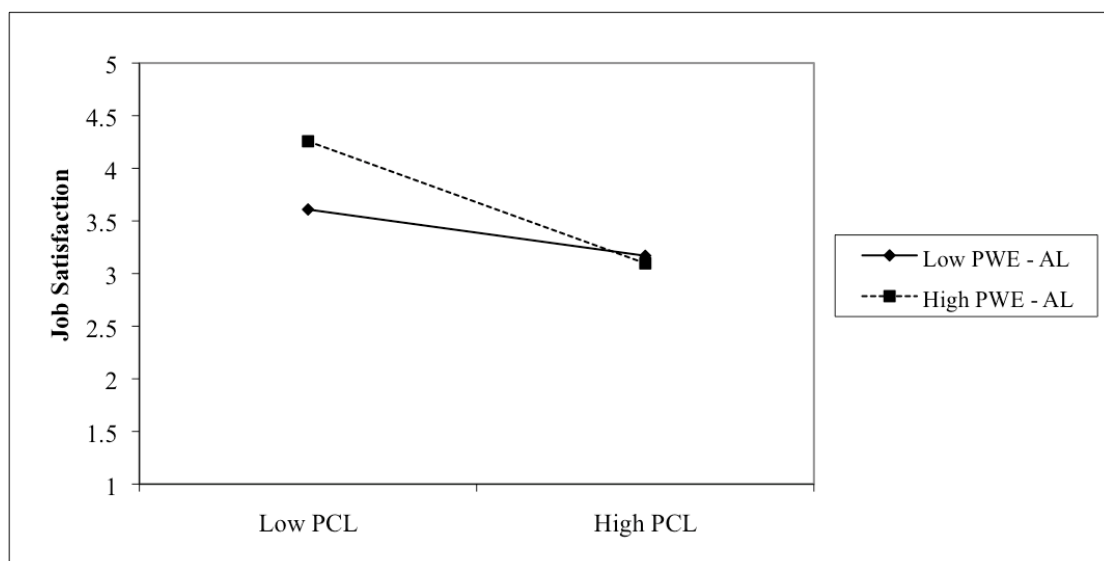
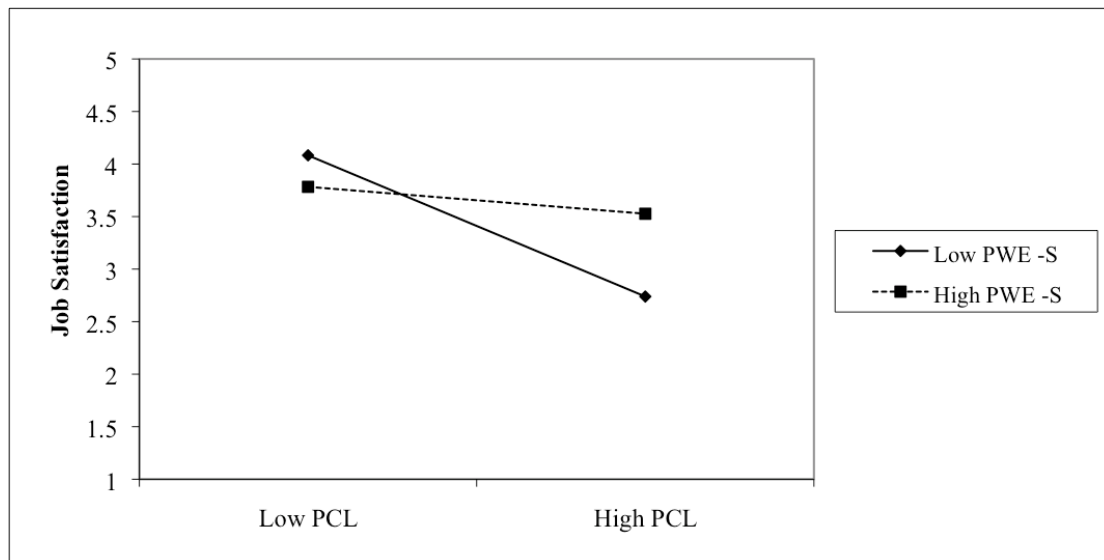


Figure 5. Interaction between perceived co-worker loafing (PCL) and Protestant work ethic – anti-leisure (PWE – AL).



*Figure 6.* Interaction between perceived co-worker loafing (PCL) and Protestant work ethic – success (PWE – S).

## Discussion

The present study produced findings which partially supported the hypotheses, however, several moderating effects were in the opposite direction of what was predicted. It also saw a significant correlation between perceived co-worker loafing and job satisfaction, a relationship which had not been investigated before. Contrary to what was predicted, there was only a significant relationship between perceived co-worker loafing and one dimension of self-rated job performance and none between perceived co-worker loafing and work behaviours. There were three instances where subdimensions of Protestant work ethic moderated relationships in the study in the predicted direction, and three instances where they moderated relationships in the opposite direction than predicted.

The predicted relationship between perceived co-worker loafing and job performance was only partially supported, with just the social subdimension of job

performance having a significant negative relationship. This was an interesting result, implying that the actual work being performed (technical job performance) was not affected by perceived co-worker loafing, but that relationships with others were what was affected. These results coincide with research by Hung et al. (2009), who found that perceived co-worker loafing was positively related to counterproductive behaviour towards individuals and not counterproductive behaviour towards the organization. This is possibly because the participant feels animosity towards the loafing individuals and not the organization itself.

It was found that there was a significantly negative relationship between perceived co-worker loafing and job satisfaction. A possible reason for this is that participants are upset seeing their co-workers loafing and having to see this every day at work is related to them to have lower satisfaction with their job. This is an important result because it is the first time the relationship between these two variables has been examined and it was found to be significant and it opens up the door for more research to be conducted in order to find out the reason why this could be.

When it came to the relationship between perceived co-worker loafing and undesirable work behaviour, the hypothesis turned out not to be confirmed as there were no significant direct relationships between perceived co-worker loafing and any of the work behaviour variables measured by the on-the-job behaviour scale. This goes against the results of Hung et al. (2009), who found a positive relationship between perceived co-worker loafing and counterproductive work behaviours. This can be explained by the fact that, while similar, the undesirable work behaviours in

this study are different from the counterproductive work behaviours in Hung et al. (2009). The lack of direct relationships could also mean that there are moderating factors which we explored with the other hypotheses. Overall, these results indicate that the relationship between perceived co-worker loafing and work behaviour is still not clear and is in the need for further research.

Hypothesis 3 was that Protestant work ethic would moderate the relationship between perceived co-worker loafing and job performance, such that the negative relationship between perceived co-worker loafing and self-rated job performance is weaker when Protestant work ethic is high than when it is low. This hypothesis was supported, but not to the extent that was predicted. When Protestant work ethic – hard working was high, there was a significantly positive relationship between perceived co-worker loafing and the technical aspect of job performance. This makes sense because the technical aspect of job performance coincides with the Protestant work ethic – hard working questions. For example, job performance – technical questions include a focus on performing without mistakes and on time and Protestant work ethic – hard working places a high importance on the value of hard work. It is understandable that someone who scores highly in these values would continue performing without mistakes and on time even when faced with perceived co-worker loafing. There were no significant relationships between the social sub-dimension of self-rated job performance or other sub-dimensions of Protestant work ethic.

Hypothesis 4 was that Protestant work ethic would moderate the relationship between perceived co-worker loafing and work behaviour, such that the positive relationship between perceived co-worker loafing and undesirable work behaviour is

weaker when Protestant work ethic is high than when it is low. This hypothesis was also only partially supported with Protestant work ethic - success moderating the effect perceived co-worker loafing had on work behaviour - physical withdrawal in the predicted manner. This result is understandable as questions in the work behaviour – physical withdrawal subdimension ask the participant if they leave work early and fall asleep at work. Protestant work ethic – success on the other hand emphasizes hard work and “approaching unpleasant tasks with enthusiasm.” Someone who has these values is unlikely to leave work earlier and fall asleep at work. The relationship between perceived co-worker loafing and job satisfaction was also moderated by Protestant work ethic - success. For those that were low on Protestant work ethic – success, the negative relationship between perceived co-worker loafing and job satisfaction was stronger. This shows that while dimensions of Protestant work ethic did not change the direction of the relationship as predicted, the success dimension did reduce the strength of perceived co-worker loafing’s impact.

There were several instances when the moderation went in the opposite direction than expected. When Protestant work ethic - asceticism was high, there was a positive relationship between perceived co-worker loafing and work behaviour psychological withdrawal. Also, when Protestant work ethic – hard working was high there was a positive relationship between perceived co-worker loafing and work behaviour - antagonistic. It is possible that seeing their co-workers loafing, those high in Protestant work ethic – hard working become upset and exhibit antagonistic behaviours. This is a similar result to Abele and Diehl (2008), who found that those who believed in the ethical value of hard work (a subdimension of their Protestant work ethic scale) reduced their output when they saw co-worker loafing. The opposite

of the predicted outcome also occurred when exploring the relationship job satisfaction had with perceived co-worker loafing and Protestant work ethic. This relationship was moderated by Protestant work ethic – anti-leisure. When Protestant work ethic – anti-leisure was low, there was negative relationship between perceived co-worker loafing and the job satisfaction, whereas when Protestant work ethic – anti-leisure was high, there was a significant negative relationship between perceived co-worker loafing and the job satisfaction. This result is understandable because people who feel strongly about anti-leisure, the belief that too much leisure and not enough hard work is ruining society, are not likely to enjoy seeing their co-workers loafing. If they are forced to see loafing by their co-workers on a regular basis it is likely to upset them, leading to less satisfaction with their job.

The present study differed from past efforts such as Smrt and Karau (2011) which investigated the moderating role of Protestant work ethic in social loafing. They found that Protestant work ethic did have a moderating effect, showing those high in Protestant work ethic were more resilient to social loafing. They used the same Protestant work ethic scale as this study (Mirels & Garrett, 1971), however, they ran their analysis on it as a single dimension not breaking it up into subdimensions like the present study. This is a strength of the present study, as it offers a more nuanced picture of how Protestant work ethic interacts with loafing in relation to different outcomes.

### **Limitations and Future Research**

A major limitation to this study is its cross-sectional design, meaning that all results were collected concurrently. This does not measure changes over time and limits the ability to make definite conclusions about causality. However, this is still one of the few studies looking at perceived co-worker loafing and it is good for preliminary research to be performed before larger and more detailed projects are started. Participants were recruited with the incentive of entering a draw to win a \$50 petrol voucher and then answered the questions online without supervision. This means they may have skipped through the questions or not answered them carefully in order to go into the prize draw. This detracts from the reliability of their answers. This method did however enable a large amount of participants to be recruited from a range of occupations and backgrounds.

All variables were measured through self-report. This limits reliability as it only offers the participants' point of view, not an independent observer. While this detracts from the reliability of the job performance and work behaviour answers, the majority of variables (perceived co-worker loafing, Protestant work ethic and job satisfaction) could only be obtained through self-report.

Based on the finding that Protestant work ethic was not as consistent of a moderator as predicted, future research could include the use of a Protestant work ethic scale which features a need for equity. This is a trait of people who think that rewards for work should be distributed based on effort and achievement and is a known trait of Protestant work ethic (Furnham, 1990, p. 168). Such a measure would



be relevant to this field of research because a high level of equity norm would likely have a moderating effect on the relationship between perceived co-worker loafing and job performance, behaviour and satisfaction. Skarlicki and Folger (1997) found that employees may change their behaviour in response to perceived inequity. If they perceive others to be loafing and still receiving the same rewards as them, it is likely to have a negative effect. Abele and Diehl (2008) included an equity component in their research looking at the moderating effect of Protestant work ethic on the “sucker effect”. They found that those high in this equity component reduced their effort considerably when given the impression that they would be the “sucker”. Another variable to be measured in future research could be revenge motive, which was found to have served as a mediator between perceived loafing and counterproductive work behaviour (Hung et al., 2009). Compounding on this, procedural justice could also be measured because if they perceive others to be loafing but being punished for it, the perceived loafing may not have such a strong effect.

Since there were no significant direct relationships between perceived co-worker loafing and any work behaviours and only one of the two self-rated job performance measures, future researchers could use different measures or the same measures in a different, more controlled population to see if there is a significant relationship as there are still strong indicators that perceived co-worker loafing would have an impact on these things. Many of the past research looked at counterproductive work behaviour so this could be used instead of the on-the-job behaviour scale in future research.

There have not been many studies done on perceived co-worker loafing so this study will be a great help in developing our understanding. Most of the previous research done on perceived co-worker loafing was performed in experimental settings. This study questioned people from a diverse range of ages and occupations on their opinions of their real work environment. It is also the first to examine the relationship between perceived co-worker loafing and job satisfaction, which turned out to be significant. Future research could further investigate this relationship possibly looking at why it is significant.

### **Concluding Remarks**

This study has shown how important Protestant work ethic is on the relationship between perceived co-worker loafing and work behaviour and how important it is to take the different sub-dimensions of Protestant work ethic into account. There was not a significant relationship between perceived co-worker loafing and any of the work behaviour subdimensions, but several subdimensions of Protestant work ethic still moderated their relationship. Protestant work ethic is also important in the relationship between perceived co-worker loafing and job satisfaction. This was the only relationship in which two subdimensions of Protestant work ethic were moderators. The most consistent moderators are Protestant work ethic – success and Protestant work ethic – hard working each with two significant interactions. Protestant work ethic was expected to reduce the effects of perceived co-worker loafing on job performance, work behaviour and job satisfaction. However, in half of the interactions found in this study it only seems to have exacerbated the effects. Results like these show how Protestant work ethic is a nuanced variable with

both positive and negative aspects, not the buffer against outside influences that was predicted.

This study also shows that perceived co-worker loafing has more of an impact on job satisfaction and social interactions at work than the technical work or work behaviours. It should be noted that this was only perceived co-worker loafing, not necessarily actual loafing. If employers deem this important and want to minimize the effect perceived co-worker loafing can have, employees can be educated on what each person does at their job and how, so there is no confusion over whether someone is loafing or not.

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## Appendix A

What is your age?

What is your gender

What is your current occupation?

How long have you worked at your current job?

The following responses will be made on a five-point scale:

My coworkers are trying as hard as they can

My coworkers are “free-loaders”

My coworkers were contributing less than I anticipated

Given their abilities, my coworkers are doing the best they can

The following responses will be made using a seven-point scale:

In past twelve months, how often have you...

Done more work than required

Volunteered to work overtime

Made attempts to change work conditions

Negotiated with supervisors to improve job

Tried to think of ways to do the job better

Thought of being absent

Chatted with co-workers about non-work topics

Left work situation for unnecessary reasons

Daydreamed

Spent work time on personal matters

Put less effort into the job than should have

Thought of leaving current job

Let others do your work

Left work early without permission

Taken longer lunch or rest break than allowed

Taken supplies or equipment without permission

Fallen asleep at work

Reported others for breaking rules or policies

Filed formal complaints

Argued with co-workers

Disobeyed supervisor's instructions

Spread rumors or gossip about co-workers

The following responses are obtained using a seven-point scale where 1 = strongly disagree and 7 = strongly agree:

Most people spend too much time in unprofitable amusement

Our society would have fewer problems if people have less leisure time

Money acquired easily, e.g. through gambling or speculation, is usually spent unwisely

There are few satisfactions equal to the realization that one has done his (her) best at a job

The most difficult college courses usually turn out to be the most rewarding

Most people who do not succeed in life are just plain lazy

The self-made man is likely to be more ethical than the man born to wealth



I often feel I would be more successful if I sacrificed certain pleasures

People should have more leisure time to spend in relaxation

Any man who is able and willing to work hard has a good chance of succeeding

People who fail at a job have usually not tried hard enough

Life would have very little meaning if we never had to suffer

Hard work offers little guarantee of success

The credit card is a ticket to careless spending

Life would be more meaningful if we had more leisure time

The person who can approach an unpleasant task with enthusiasm is the person who gets ahead

If one works hard enough he is likely to make a good life for himself

I feel uneasy when there is little work for me to do

A distaste for hard work usually reflects a weakness of character

The following responses are obtained using a five-point scale where 1 = very poorly, 2 = not very well, 3 = all right, 4 = very well and 5 = exceptionally well.

In the last week, how well were you...

Handling the responsibilities and daily demands of your work?

Making the right decisions?

Performing without mistakes?

Getting things done on time?

Getting along with others at work?

Avoiding arguing with others?

Handling disagreements by compromising and meeting other people half-way?

Responses are obtained on a 5-point Likert-type scale where 1 = strongly disagree and 5 = strongly agree.

How satisfied are you with the nature of the work you perform?

How satisfied are you with the person who supervises you – your organisational superior?

How satisfied are you with your relations with others in the organisation with whom you work – your co-workers or peers?

How satisfied are you with the pay you receive for your job?

How satisfied are you with the opportunities which exist in this organisation for advancement or promotion?

Considering everything, how satisfied are you with your current job situation?